

Topic: Division of zero**Question:** Which of these is false?**Answer choices:**

A $1 \cdot 0 = 0$

B $\frac{1}{0} = 0$

C $\frac{0}{1} = 0$

D $0 \cdot 1 = 0$



Solution: B

A fraction is always undefined if the denominator is equal to 0, so the equation in answer choice B is false because it implies that we *can* divide 1 by 0 (and that the result of that division is 0).



Topic: Division of zero**Question:** Which of these is true?**Answer choices:**

A $\frac{0}{3} = 0$

B $\frac{3}{0} = 0$

C $\frac{2 \cdot 3}{0} = 0$

D $2 \cdot \frac{1}{2} \cdot 3 = 0$



Solution: A

A fraction is always undefined if the denominator is equal to 0, so the equations in answer choices B and C are false.

The equation in answer choice D is not true because the left-hand side isn't 0.

The equation in answer choice A is the correct choice because 0 divided by any nonzero number (any number other than 0) is 0.



Topic: Division of zero**Question:** Which answer choice is undefined?**Answer choices:**

A $\frac{0}{5}$

B $\frac{0}{3}$

C $\frac{5}{0}$

D $\frac{3}{0.1}$



Solution: C

In math, dividing by 0 makes a fraction undefined, so the fraction in answer choice C is undefined. All of the other answer choices are defined, because having 0 in the numerator just results in the real number answer of 0.

